

# CMAP FY 2016-2020 CMAQ PROJECT APPLICATION

## TRAFFIC FLOW IMPROVEMENTS

<b>I. PROJECT IDENTIFICATION</b>					
Project Sponsor <b>Cook County Department of Transportation and Highways</b> <b>DuPage County Division of Transportation</b>			Contact Information – Name, Title, Agency, Address, Phone, e-mail (e-mail required)  <b>John Yonan P.E., Superintendent</b> <b>Cook County Department of Transportation and Highways</b> <b>69 W. Washington, Rm # 2300</b> <b>Chicago, Illinois 60602-1369</b>		
Other Agencies Participating In Project <b>Illinois State Toll Highway Authority</b> <b>City of Elmhurst, City of Northlake</b>			<b>Telephone: (312) 603-1601</b> <b>Fax: (312) 603-9945</b> <b>John.Yonan@cookcountyil.gov</b>		
<input checked="" type="checkbox"/> New Project <input type="checkbox"/> Existing CMAQ Project <input type="checkbox"/> Add CMAQ to Existing Project		TIP ID if project already has one <b>03-96-0021</b>			
<b>II. PROJECT LOCATION</b>					
Projects not readily identified by location must provide a title on the last line of this section Attach a map sufficient to accurately locate this project in a GIS system					
Name Of Street Or Facility To Be Improved <b>I-294 ramp, County Line Road, IL 64, US 20, Northwest Ave</b>			Marked Route # <b>I-294; IL 64; US 20</b>		
Project Limits: North/West Reference Point/Cross St/Intersection <b>NA (see Project Length: 1.97 miles (I-294 ramp); 0.51 miles (County Line Rd); 0.63 miles (IL 64); 0.4 miles (US 20/E Lake St); 0.18 miles (Northwest Ave)) See Exhibits A-1 and A-2.</b>			Marked Route #		Municipality & County <b>Elmhurst, Northlake; DuPage and Cook Counties</b>
Project Limits: South/East Reference Point/Cross St/Intersection <b>NA</b>			Marked Route #		Municipality & County <b>Elmhurst, Northlake; DuPage and Cook Counties</b>
Other Project Location Information Or Project Title <b>I-294 at IL 64 (Located in City of Elmhurst, DuPage County, and the City of Northlake, Cook County, IL)</b>					
<b>III. PROJECT FINANCING &amp; CMAQ FUNDING REQUEST</b>					
Please review the <a href="#">instructions</a> .					
	Starting Federal Fiscal Year*	Total Phase Costs	(New) CMAQ Funds Requested	Other Federal Funds Including prior CMAQ awards	
				Fund Type	Amount
Engineering Phase 1	2007	<b>\$876,000</b>	\$		\$
Engineering Phase 2	2014	<b>\$1,978,566</b>	\$		\$
Right-Of-Way Acquisition	2015	<b>\$4,191,000</b>	<b>\$3,352,800</b>		\$
Construction (Including Construction Engineering)	2017	<b>\$32,646,342</b>	<b>\$26,117,074</b>		\$
Engineering (For Implementation Projects)		\$	\$		\$
Implementation		\$	\$		\$
Alternatives Analysis		\$	\$		\$
*Phase must be accomplished within 3 years		<b>\$39,691,908</b>	<b>\$29,733,683</b>		
Total Project Costs					
Source Of Local Matching Funds		<b>Illinois State Toll Highway Authority (Illinois Tollway)</b>			
If Soft Matching Funds Are Intended To Be Used, Please Contact CMAP Staff.					
Have the Matching Funds Been Secured? (Provide Details):		<b>Yes, Move Illinois Program.</b>			

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### IV. PROJECT EMISSIONS BENEFIT DATA

Type of Project (Check All that Apply): **See Attachment A for further explanation.**

<p>Intersection Type:</p> <p><input type="checkbox"/> Roundabout</p> <p><input type="checkbox"/> Restricted Crossing U-Turn (J-Turn)</p> <p><input type="checkbox"/> Median U-Turn</p> <p><input type="checkbox"/> Diverging Diamond Interchange</p> <p><input type="checkbox"/> Conventional</p>	<p>Bottleneck Eliminations:</p> <p><input type="checkbox"/> Highway-Rail Grade Separation</p> <p><input type="checkbox"/> Two-Way Left Turn Lane</p> <p><input checked="" type="checkbox"/> Realignment</p>	<p><input type="checkbox"/> Remove Obstruction</p> <p><input type="checkbox"/> Vertical Clearance</p> <p><input checked="" type="checkbox"/> Truck Route Improvement</p>
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<p>Turn Lanes:</p> <p><input checked="" type="checkbox"/> Add Dual Left Turn Lanes</p> <p><input type="checkbox"/> Add Single Left Turn Lanes</p> <p><input type="checkbox"/> Add Right Turn Lanes</p> <p><input checked="" type="checkbox"/> Multiple Turn Lane Types</p>	<p>Reconstruction:</p> <p><input checked="" type="checkbox"/> Full Intersection Reconstruction (existing signal)</p> <p><input type="checkbox"/> Traditional Interchange Reconstruction</p>	<p>Signals:</p> <p><input checked="" type="checkbox"/> Signal Modernization</p> <p><input checked="" type="checkbox"/> New Signalization</p>
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Project Length (Miles – Bottleneck Elimination And Multiple Intersections Only): **1.97 miles (I-294 ramp); 0.51 miles (County Line Rd); 0.63 miles (IL 64); 0.4 miles (US 20/E Lake St); 0.18 miles (Northwest Ave)**

Posted Speeds (Miles Per Hour For Each Street): **40 MPH (County Line Road); 40 MPH (IL 64/North Ave); 35 MPH (US 20); 30 MPH (Northwest Ave)**

Bi-Directional AADTs by Approach: North Leg (North Approach): 7,400 [10% HV] (County Line Rd); South Leg: 24,800 [11%] (US 20); West Leg: 36,400 [5%] (IL 64 W); East Leg: 44,500 (IL 64 E) [5%]  
Year: 2013

Do queues currently clear on the major street at signalized intersections in the pm peak period? ☐ Yes ☒ No

Are the subject roadways included as part of the Congestion Management Process Highway System? ☒ Yes ☐ No

Is the project location identified in IDOT's 5% Safety Location report? ☒ Yes ☐ No

If "Yes" is checked, indicate in the project description how the project will address the safety issues.

Will bicycle facilities be added as part of this project? ☐ Yes ☒ No **Bicycle and pedestrian facilities are being accommodated as part of this project; facilities will be developed under a separate project. See Attachment A, VI. Project Description for more information.**

If "Yes" is checked, describe the bicycle facility in the project description providing details asked for on the bicycle facility application form.

### V. PROGRAM MANAGEMENT INFORMATION

Is right-of-way acquisition required for this project? ☒ Yes ☐ No

If so, has right-of-way been acquired? ☐ Yes ☒ No **In Progress**

Preliminary Design Status:

☐ N.A. ☐ Not Begun ☐ Agreement executed by Central Office ☐ Engineering Underway

☐ Submitted for review ☐ Responding to review comments

☐ Agreement sent to District 1 for signatures ☒ Design approval granted

Date approval is anticipated or was granted: **February 2013**

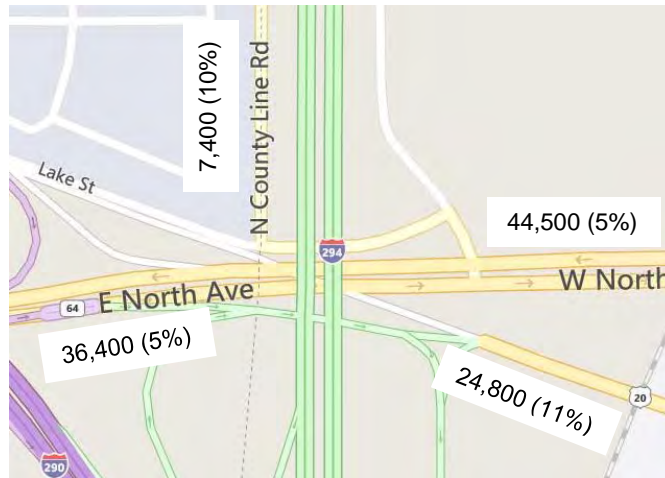
Estimated Completion Year: **2018**

## VI. PROJECT DESCRIPTION

Please describe project, including any qualitative travel time reliability improvements listed on pages 8-9 of application booklet.

**See Attachment A, VI. Project Description, as well as Exhibits A-1 and A-2 for more information.**

The figure below illustrates the bi-directional AADTs by approach noted above.



## Attachment A

### IV. PROJECT EMISSIONS BENEFIT DATA

**Type of Project:** The I-294 and IL 64 (North Avenue) project will eliminate the bottleneck created at the congested I-294 and I-290 system interchange and on the local arterial system due to a missing southbound exit ramp from I-294, as well as reconfigure the IL 64 and US 20 intersection to ease the flow of traffic through the intersection. The missing egress point from I-294 to County Line Road and North Avenue causes significant out of direction travel and restricts traffic flow on an already congested interstate and local roadway network.

The proposed improvement will reduce congestion at the I-294 and I-290 system interchange and adjacent secondary roadways, eliminating out of direction travel for interstate traffic destined for IL 64, employment centers on the west side of I-294 and the Northlake Industrial Area. The project improves the reliability of the roadway network.

### VI. PROJECT DESCRIPTION

**Existing Configuration:** Under the existing configuration, southbound I-294 does not have access to IL 64 (North Avenue), US 20 (Lake Street), County Line Road, and Northwest Avenue, which causes substantial out of direction travel. See Exhibits A-1 and A-2.

- #1 Passenger Vehicles destined to eastbound IL 64** – Passenger vehicles currently use the congested I-294 at I-290 system interchange to access the IL 64 corridor, with traffic destined for eastbound IL 64 needing to make a U-turn maneuver via residential streets. Truck turn prohibitions have been posted along the corridor making commercial movement very lengthy and leading to poor performance on local arterials.
- #2 The Employment on the west side of I-294** – Passenger and truck vehicles that want to reach the nearby employment base along County Line Road, including McMaster Carr (City of Elmhurst's largest employer) must travel a similar path. However, instead of turning through the neighborhood they continue westbound on IL 64 to Emroy Ave where they head north to the I-290 Frontage Road before heading back east to County Line Road on the north side of I-290.
- #3 Northlake Industrial Area** – Trucks destined for the Northlake Industrial Area (east side of I-294) currently use one of two routes: Route A—the congested I-294 at I-290 system interchange to access the IL 64 corridor, or Route B—exit southbound I-294 at IL 19 (Irving Park Road), 5 miles north of IL 64. With the first route truck traffic use the congested I-294 at I-290 interchange to westbound I-290. They continue past IL 64 to York Road, where they exit and travel south on York Road to return to I-290 eastbound to take the US 20/IL 64 exit. With the second route truck traffic exit southbound I-294 at IL 19 and travel south on Mannheim Road (US 12/45) to westbound IL 64.

**Proposed Improvements:** Construction of a new southbound I-294 exit ramp that provides direct access to northbound and southbound County Line Road. Additionally, intersection improvements at County Line Road and US 20, and at IL 64 and the Northwest Avenue, provide a connection for I-294 exiting traffic destined for IL 64 and US 20.

#### Elements for CMAQ Eligibility Consideration:

- Construction of the new southbound exit ramp from I-294 to County Line Road,
- Realignment of County Line Road at the intersection with the exit ramp for traffic to travel both northbound and southbound on County Line Road,
- Reconfiguration of the IL 64 and US 20 intersections with County Line Road providing access for southbound I-294 exiting traffic, and

- Bridge improvements at US 20 over IL 64 (North Avenue) accommodating a ramp that would provide direct access to eastbound IL 64.

## **CMAQ Project Selection**

### **Cost-effectiveness of Air Emissions Reductions**

**Travel Performance:** Per a coordination meeting with CMAP staff on January 22, 2015, the travel performance benefits of the project will be submitted to CMAP under separate cover in early April, 2015. As the project team will be performing the assessment, the Input Module Worksheet is not required for this project.

### **Transportation Impact Criteria**

#### **Regional Priorities:**

The I-294 at IL 64 (North Avenue) project is an element of the Elgin O'Hare Western Access Project (EOWA), which is a major capital project identified in the GoTo2040 Regional Transportation Plan. As an element of a major capital project, the I-294 at IL 64 (North Avenue) project should receive consideration equal to 10 points.

#### **Reliability:**

Quantitative Measures of Travel Time Reliability: The CMAP 2012 Travel Time Reliability Map identifies the area within the vicinity of the I-294 and IL 64 is rated as very severely unreliable to extremely unreliable due to the amount of traffic and congestion in the area. The project should receive consideration equal to 10 points for the project.

Qualitative Travel Time Reliability: Integrated Corridor Management and Work Zone Management will be implemented as part of the project within the context of the overall construction of the EOWA. Although the project is implementing multiple qualitative measures the scoring is not cumulative, the project should receive the maximum of 5 points.

*Integrated Corridor Management (ICM)* consists of managing the corridor as a multimodal system and making operational decisions for the benefit of the corridor as a whole. Through deployment of Intelligent Transportation Systems in the project area, including surveillance, extensive traffic detection and a redundant communication and power distribution network, the Tollway will be able to realize significant improvements in the efficient movement of people and goods through institutional collaboration and proactive management of traffic along the corridor. The proposed improvements in this specific project will be a continuation of the overall corridor wide ICM philosophies being pursued by the Tollway along the EOWA corridor for efficient and proactive multimodal traffic management throughout the region, in coordination with other regional agencies.

*Work Zone Management* is management of traffic and incidents during construction, necessary to minimize traffic delays, maintain motorist and worker safety, complete roadwork in a timely manner, and maintain access for businesses and residents. Through proactive public outreach, surveillance during construction for traffic and incident management and advanced travel information dissemination to the public during construction, the Tollway is able to proactively meet the Work Zone Management philosophies noted above and maintain safe work conditions for all stakeholders. Currently for the EOWA program, the Tollway provides detailed work zone information to the public through dedicated website and public outreach process, including live video images from the construction site and the agency proposes to continue the established outreach and traveler information dissemination processes through this project.

**Safety (IDOT 5% Safety Location):**

SAFETEA-LU required each State to develop and implement a State Strategic Highway Safety Plan (SHSP) in order to obligate funds for the Highway Safety Improvement Program. Illinois' plan provides a comprehensive framework (4E's: Engineering, Enforcement, Education, and Emergency Medical Services) for reducing highway fatalities and serious injuries and establishes statewide goals, objectives, and key emphasis areas. As part of this plan IDOT has identified the top 5 percent of locations exhibiting the most severe safety needs based on crashes, injuries, deaths, traffic volume levels, and other relevant data. IDOT updates this information on an annual basis.

In the project area, North Avenue between Clinton and I-294 is identified as an IDOT 5 percent location. The proposed improvements will improve safety by removing out of direction travel along North Avenue (between Clinton and I-294), which will decrease the exposure and decrease the frequency of crashes. The proposed traffic flow will be making more direct travel paths, resulting in (1) less mileage spent on the road, (2) less turning movements, and (3) less decisions made at traffic control devices (traffic signals, yield signs, stop signs and weaving). Since roughly 90% of all crashes are driver-related, it is expected that removing the need for drivers to make decisions would result in a decrease in the frequency of crashes. As the project addresses an IDOT 5 percent report location it should receive consideration equal to 5 points.

**Congestion Management Process Highway System:**

The I-294 at IL 64 (North Avenue) is part of the Chicago Region's Congestion Management Highway Network. North Avenue is a Strategic Regional Arterial. The project should receive consideration equal to 10 points.

**Other Projects:**

Project Bicycle and Pedestrian Accommodations (not part of the CMAQ funding request): In compliance with IDOT's "Complete Streets Policy" the Tier Two EIS process identified two bicycle and pedestrian accommodations within the I-294 and IL 64 project area: (1) a path along North Avenue from Northwest Avenue to the project limits, and (2) along Northwest Avenue from North Avenue along the length of the improvement. The path along Northwest Avenue will tie into a bicycle and pedestrian facility under development by the City of Northlake along the east side of Northwest Avenue that has been funded with a CMAQ grant. The proposed paths will be finalized during final design.



Candidate CMAQ Project Element  
I-294 at IL 64 (North Avenue)



EXISTING CONFIGURATION

**LEGEND**

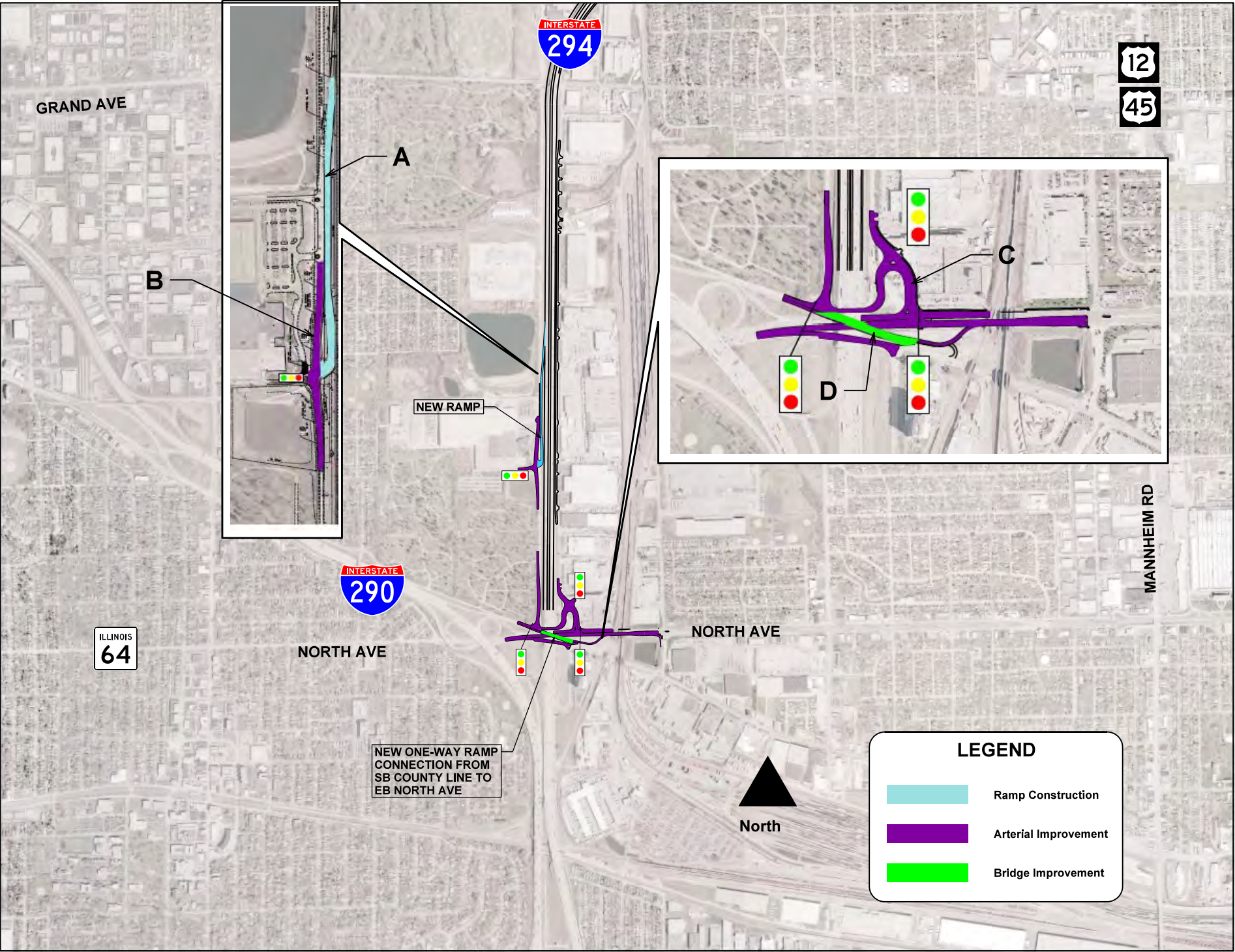
- SB I-294 Travel Pattern To EB North Avenue (#1)
- To NB County Line Rd And Employment On West Side Of I-294 (#2)
- Travel Pattern To Northlake Industrial Area (#3)
- Employment / industrial Area

Exhibit A-1



Candidate CMAQ Project Element

# I-294 at IL 64 (North Avenue)



PROPOSED IMPROVEMENT

- Improvement Descriptions**
- A. Construction of the new southbound exit ramp from I-294 to County Line Road,
  - B. Realignment of County Line Road at the intersection with the exit ramp for traffic to travel both northbound and southbound on County Line Road,
  - C. Reconfiguration of the IL 64 and US 20 intersections with County Line Road providing access for southbound I-294 exiting traffic, and
  - D. Bridge improvements at US 20 over IL 64 (North Avenue) accommodating a ramp that would provide direct access to eastbound IL 64.



## **DETAILED ESTIMATE OF COSTS**

The following Detailed Estimate of Costs provides a cost estimate commensurate with the level of design development performed to date. This estimate was prepared using practices set forth by the Association for the Advancement of Cost Estimating International (AACEI) (Recommended Practices Nos. 17R-97 and 18R-97) for concept design stage estimating. The current estimate is considered a Parametric Model, with costs for major project elements estimated on the basis of unit pricing and quantities, and for other elements estimated on a percentage basis. In conformance with AACEI recommendations, the current estimate of costs includes a 25% construction contingency. AACEI defines contingency as “a special provision for an unforeseeable elements of cost within the defined project scope; particularly important where previous experience relating estimates and actual costs has shown that unforeseeable events which will increase costs are likely to occur”.

The cost estimating methodology for the EOWA project has been reviewed and approved by federal (FHWA) and state (IDOT, Illinois Tollway) agencies involved in the development of the EOWA project. This includes confirmation of the estimating methodology as part of FHWA’s Cost Estimate Review in December 2013. Detailed information regarding project cost estimating procedures and calculations are available in the EOWA project records.

## DETAILED ESTIMATE OF RIGHT-OF-WAY ACQUISITION COSTS

Item	Description (Parcel ID)	Unit (sq. ft.)	Quantity	Unit Price	Total
Parcel	TW-7-12-001 - 1506100033	11,550.71	Full	NA	\$184,000
Parcel	TW-7-12-002 - 1506100011	40,574.19	Full	NA	\$615,000
Parcel	TW-7-12-003 - 1231301019	97,807.21	Partial	NA	\$1,476,000
Parcel	TW-7-12-025 – 0336400004, 0336400005	20,705.72	Full	NA	\$369,000
Parcel	TW-7-12-026.T - 0336206040	4,120.63	Temp. Ease.	NA	\$25,000
Parcel	TW-7-12-027 - 0336204002	3,147.81	Temp. Ease.	NA	\$12,000
Parcel	TW-7-12-027 - 0336204002	33,568.65	Partial	NA	\$369,000
Parcel	TW-7-12-028 - 0325409002	2,707.28	Temp. Ease.	NA	\$12,500
Parcel	TW-7-12-028 - 0325409002	26,743.46	Partial	NA	\$553,000
Direct Right-of-Way Acquisition Cost					SUBTOTAL
					\$3,615,500
Right-of-way Engineering Cost					
					\$210,000
<b>Total Base Year Cost:</b>					<b>\$3,825,500</b>
<b>Total Year of Expenditure Cost:</b>					<b>\$4,191,000</b>

ESTIMATES MUST BE BASED UPON QUANTITIES AND UNIT COSTS WHENEVER POSSIBLE.  
LUMP SUM AMOUNTS ARE NOT ACCEPTABLE

# City of Northlake/ City of Elmhurst

## SB I-294 to EB IL 64 Interchange Project

### Detailed Estimate of Construction Costs

ITEM	Quantity	Unit	Unit Cost	Cost
<b>Overall</b>				
Maintenance of Traffic	1.0	LS	\$ 510,000	\$ 510,000
Roadway (linear items)	10,800.0	LF	\$ 18.00	\$ 194,400
Roadway (area items)	121,800.0	SY	\$ 57.50	\$ 7,003,500
Structures (linear items)	18,000.0	LF	\$ 100.00	\$ 1,800,000
Structures (area items)	15,400.0	SF	\$ 150.00	\$ 2,310,000
Drainage	17,500.0	LF	\$ 123.00	\$ 2,152,500
Removal (linear items)	23,000.0	LF	\$ 20.00	\$ 460,000
Removal (area items)	52,300.0	SY	\$ 32.00	\$ 1,673,600
Earthwork (excavation)	13,900.0	CY	\$ 20.00	\$ 278,000
Earthwork (embankment)	8,100.0	CY	\$ 40.00	\$ 324,000
Earthwork (disposal)	5,800.0	CY	\$ 70.00	\$ 406,000
Traffic Signals	5	EACH	\$ 250,000	\$ 1,250,000
Roadway Lighting/ITS	1.0	LS	\$ 600,000	\$ 600,000
				\$ 18,962,000
<b>DIRECT CONSTRUCTION COST</b>			<b>SUBTOTAL</b>	<b>\$ 18,962,000</b>
MOBILIZATION @ 6%	6%	PRCT	\$ 18,962,000	\$ 1,137,720
SECONDARY CONSTRUCTION (% of DIRECT COST)				\$ 1,137,720
<b>DIRECT AND SECONDARY COST</b>			<b>SUBTOTAL</b>	<b>\$ 20,099,720</b>
CONSTRUCTION CONTINGENCY (% of DIRECT+SECONDARY)	25%	PRCT	\$ 20,099,720	\$ 5,024,930
<b>DIRECT, SECONDARY &amp; CONTINGENCY</b>			<b>SUBTOTAL</b>	<b>\$ 25,124,650</b>
UTILITY RELOCATION (% of DIRECT+SECONDARY+CONTINGENCY)	5%	PRCT	\$ 25,124,650	\$ 1,256,233
<b>TOTAL CONSTRUCTION COST</b>			<b>TOTAL</b>	<b>\$ 26,380,883</b>
CONSTRUCTION ENGINEERING	10%	PRCT	\$ 26,380,883	\$ 2,638,088
TOTAL BASE YEAR COST:				\$ 29,018,971
TOTAL YEAR OF EXPENDITURE COST MID POINT OF CONSTRUCTION 01/01/2017:				\$ 32,646,342
**All costs adjusted for total project cost to be rounded				



## PROJECT MILESTONE SCHEDULE

Municipality: Elmhurst, Northlake  
 Project: I-294 at IL 64 (North Avenue)  
 Scope of Work: Bottleneck Elimination - Elimination of out of direction travel  
 TIP #: 03-96-0021  
 TIP Years (Ph II / Const): 2016/2017  
 Section #: \_\_\_\_\_  
 Last Constr & E3 Cost (date 02/23/15): \$32,646,342  
 Current Constr & E3 Cost (date 02/23/15): \$32,646,342

### Contact Information

Municipality	Elmhurst (DuPage Co), Northlake (Cook Co)
Council/Liaison	DMMC/WCMC
Consultant	CH2M HILL
IDOT	TBD

Date Prepared: 2/23/2015

Date Revised: \_\_\_\_\_

### Projected Dates

1. Project Scoping
2. IDOT Phase I Kick-off Meeting
3. 1st State/Federal Coordination Meeting
4. Categorical Exclusion Concurrence
5. Design Variance Concurrence
6. Submit Draft Phase I Report (PDR) to IDOT (a)
7. Public Hearing/Meeting (or N/A)
8. Right-of-Way Kick-off Meeting (or N/A)
9. Submit Final Phase I Report (PDR) to IDOT (b)
10. Submit Phase II Engr. Agreement to IDOT (or N/A)
- 11. Phase I Design Approval**
12. ROW Acquisition Initiation (or N/A) ( c )
13. Phase II Engr. Agreement Approval (or N/A)
14. Submit Pre-Final Plans and Estimates (d)
15. Submit Phase III Engr. Agreement to IDOT
16. Submit Final Plans, Specs & Estimates (PS&E) (e)
17. ROW Acquisition Complete
- 18. Construction Letting**

Initial Est.	Kick-Off	Revised/Actual	
		2007/2010	Tier 1/Tier 2
		2007/2010	Tier 1/Tier 2
		09/2010	
		NA	
			See Phase I Combined Design Report Approval - February 2013
		08/2012	See Phase I Combined Design Report Approval - February 2013
		04/2012	
		NA	
		09/2012	See Phase I Combined Design Report Approval - February 2013
		NA	12/12/12 - FHWA Signed Tier 2 Record of Decision
02/2013		02/2013	
2015			
NA			Design Schedule Under Review
05/2016			
NA			
09/2016			
12/2016			
01/2017			Construction Schedule Under Review

### Notes:

- (a) 3 to 6 month review required per complexity and submittal quality
- (b) 1 to 3 month review
- (c ) Minimum 9 to 18 months required from plats to acquisition
- (d) 1 to 4 month review
- (e) 7 to 10 days before Springfield BLR due date

See IDOT Local Roads' **Mechanics of Project Management**  
 "Federal Aid Project Initiation to Completion" Flow Chart for  
 sequence of events and estimated review times.